Fig. 1

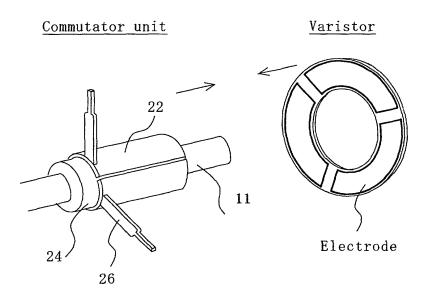
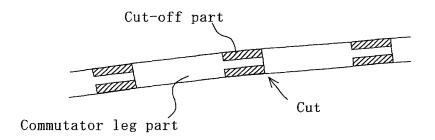


Fig. 2

Parent metal sheet to punch out commutator leg parts



Base portion

Commutator leg part

Tip portion

Fig. 3

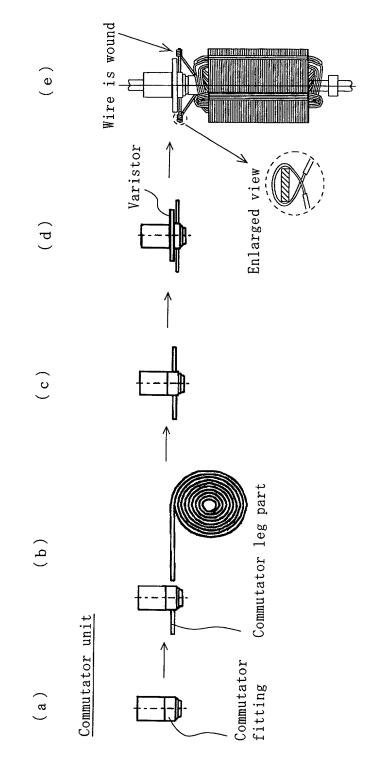


Fig. 4

Rotor

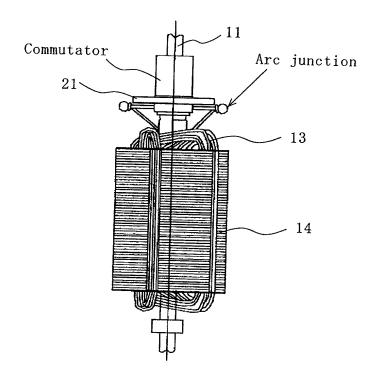


Fig. 5

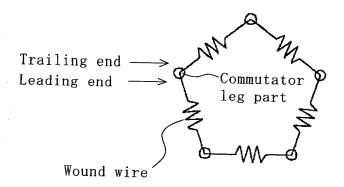


Fig. 6

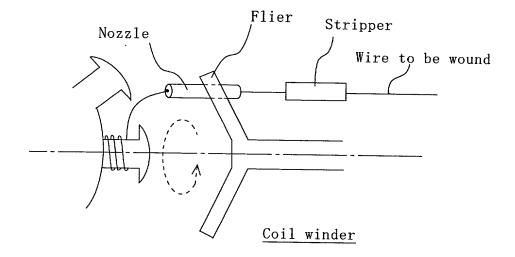


Fig. 7

Prior art

Commutator unit

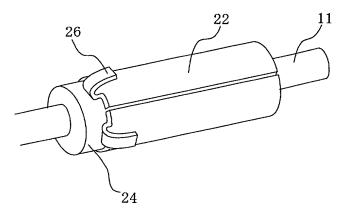


Fig. 8

Prior art

Commutator unit

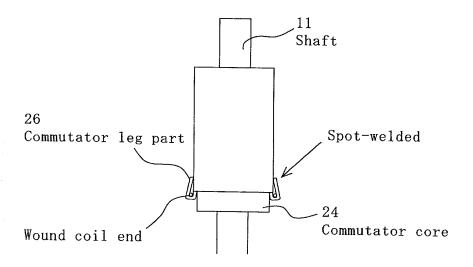


Fig. 9

Prior art

Commutator unit

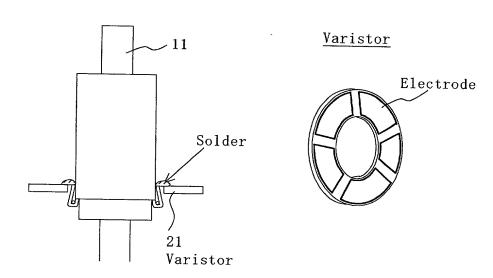


Fig. 10

Prior art

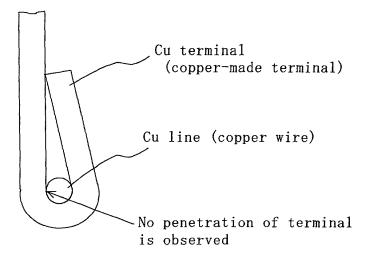


Fig. 11

